



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,152	10/31/2003	Flabio Cavalheiro		1479

7590 07/31/2006

Stephen E. Feldman  
Suite 701  
12 East 41st.  
New York, NY 10017

EXAMINER
----------

BALSIS, SHAY L

ART UNIT	PAPER NUMBER
----------	--------------

1744

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/699,152

Applicant(s)

CAVALHEIRO, FLABIO

Examiner

Shay L. Balsis

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/23/04, 1/6/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "said ends" in line 3. There is insufficient antecedent basis for this limitation in the claim. This can be corrected by changing "said ends" to ---said opposing ends---.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (USPN 4455705) in view of Nortman et al. (USPN 6276032).

Graham teaches a cleaning device comprising a cleaning member (figure 1, element 15) with a first surface having a scouring surface of loop material (figure 1, element 17) (claims 1, 7 and 8) and a second surface comprising a sponge (figure 1, element 16) (claim 10). There is a base plate (figure 1, element 10) having a plurality of projections (figure 1, element 20) arranged

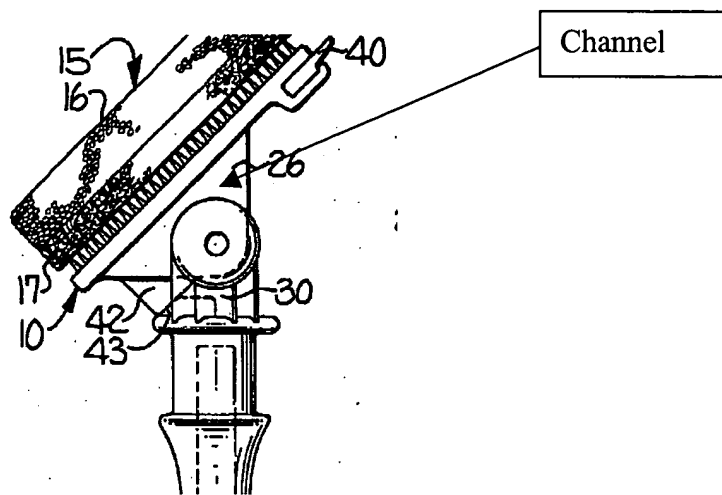
Art Unit: 1744

in rows and columns for gripping the first surface of the cleaning member (claims 1, 6). The projections each have a top segment having opposing ends (figure 6, element 21) and an intermediate section separating the top segment from the base plate by a predefined distance (claim 1). The opposing ends of the projections each have free ends, which terminate at substantially a point, and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 7) (claims 2, 3, 4). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figures 6 and 7) (claim 3). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 7) (claim 5). The base plate comprises an ergonomic, contoured handle member (figure 1, element 25) (claim 1) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand and the grasping means is removable from the base plate (figure 5) (claim 12). The handle has a channel formed between a bottom surface of the handle and the base plate. The channel is configured in such a manner as to accept at least part of a user's finger when the handle is grasped (see figure below) (claim 1). There is a connector (27, 32, 33) connecting the base member to the handle. The connector is capable of being disengaged for removing the handle from the base plate (figure 5 shows it disengaged) (claim 1). Graham teaches all the essential elements of the claimed invention however fails to teach that the projection is T-shaped with the top segment having a substantially straight upper surface (claim 1). Nortman teaches fastening hooks having a T-shaped projection each with a

Art Unit: 1744

top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 5). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Graham with the hooks as taught by Nortman since the hooks of Nortman can exhibit substantially equal fastening properties in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Graham and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together. Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Graham.



Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hintz (USPN 6493899) in view of Nortman et al. (USPN 6276032).

Hintz teaches a cleaning device comprising a cleaning member (figure 3, element 32) with a first surface having scouring surface of loops (figure 3, element 33) (claims 1, 7, 8) and a second surface comprising a sponge (figure 3, element 32) (claim 10). There is a base plate (figure 3, element 14) having a plurality of projections (figure 3, element 34) arranged in rows and columns for gripping the first surface of the cleaning member (row and columns can be formed from any formation of projections—not limited to linear) (claims 1, 6). The projections each have a top segment having opposing ends and an intermediate section separating the top segment from the base plate by a predefined distance (common hook and loop material is used; col. 3, lines 37-42) (claim 1). The base plate comprises an ergonomic, contoured handle member (figure 2, element 40) (claim 1) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand and the grasping means is removable from the base plate (figure 2, element 46) (claim 12). The handle has a channel formed between a bottom surface of the handle and the base plate. The channel is

Art Unit: 1744

configured in such a manner as to accept at least part of a user's finger when the handle is grasped (see figure below) (claim 1). There is a connector (46) connecting the base member to the handle. The connector is capable of being disengaged for removing the handle from the base plate (figure 2) (claim 1).

Hintz teaches all the essential elements of the claimed invention however fails to teach that exact details of the projections. The reference does not teach that the projection is T-shaped with the top segment having a substantially straight upper surface (claim 1) and the opposing ends of the projections have a free end, and the opposing ends have a cross section that is thicker at the connection of the ends to the top segment than at the free ends (claim 2). Additionally, Hintz fails to teach that the intermediate section of projections have a bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the intermediate section has a cross section that is thicker at the bottom end than at a top end (claim 3). Hintz also fails to teach the opposing ends terminate at substantially a point (claim 4) and that the distance between the top end and the bottom end of the intermediate segment are substantially the same (claim 5).

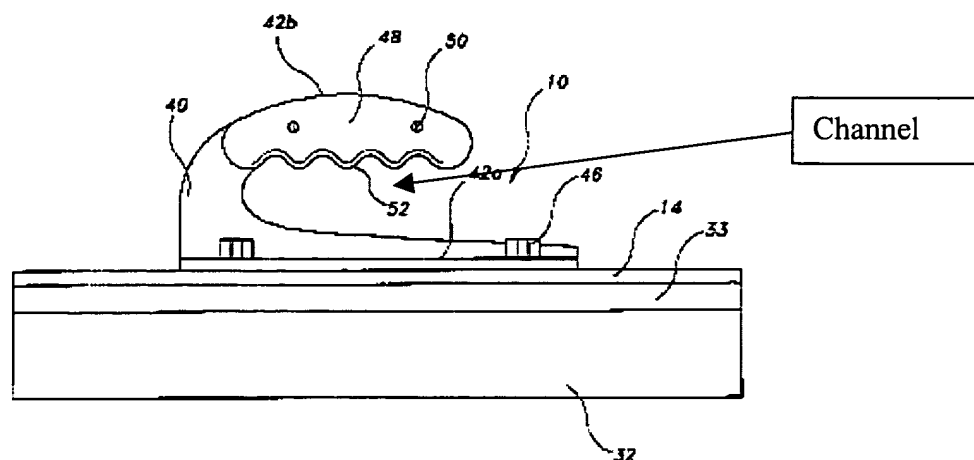
Nortman teaches fastening hooks having a T-shaped projection each with a top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 5). The intermediate section having bottom end

Art Unit: 1744

defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hintz with the hooks as taught by Nortman since the hooks of Nortman can exhibit substantially equal fastening properties in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Hintz and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together. Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Hintz.





Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paepke (USPN 5003659) in view of Fay (USPN 2676758) and in view of Nortman et al. (USPN 6276032).

Paepke teaches a cleaning device comprising a cleaning member (figure 4, element 22) with a first surface having a scouring surface of loops material (figure 4, element 20) (claims 1, 7, 8) and a second surface comprising a sponge (figure 4, element 22) (claim 10). There is a base plate (figure 4, element 16) having a plurality of projections (figure 4, element 18) arranged in rows and columns (figure 2) for gripping the first surface of the cleaning member (claims 1 and 6). The base plate comprises an ergonomic, contoured handle member (figure 2, element 12) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand and the grasping means is integral with the base plate (claim 12). The handle has a channel formed between a bottom surface of the handle and the base plate. The channel is configured in such a manner as to accept at least part of a user's finger when the handle is grasped (figure 8, element R) (col. 3, lines 12-19) (claim 1) (see figure below). Paepke teaches all the essential elements of the claimed invention however fails to teach

Art Unit: 1744

the exact details of the projections that are used (claims 1-5), for example, that the projection is T-shaped with the top segment having a substantially straight upper surface (claim 1) and the opposing ends of the projections have a free end, and the opposing ends have a cross section that is thicker at the connection of the ends to the top segment than at the free ends (claim 2). Paepke fails to teach that the intermediate section of projections have a bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the intermediate section has a cross section that is thicker at the bottom end than at a top end (claim 3). Paepke also fails to teach the opposing ends terminate at substantially a point (claim 4) and that the distance between the top end and the bottom end of the intermediate segment are substantially the same (claim 5).

Additionally, Paepke fails to teach that the handle is separable from the base plate (claim 1).

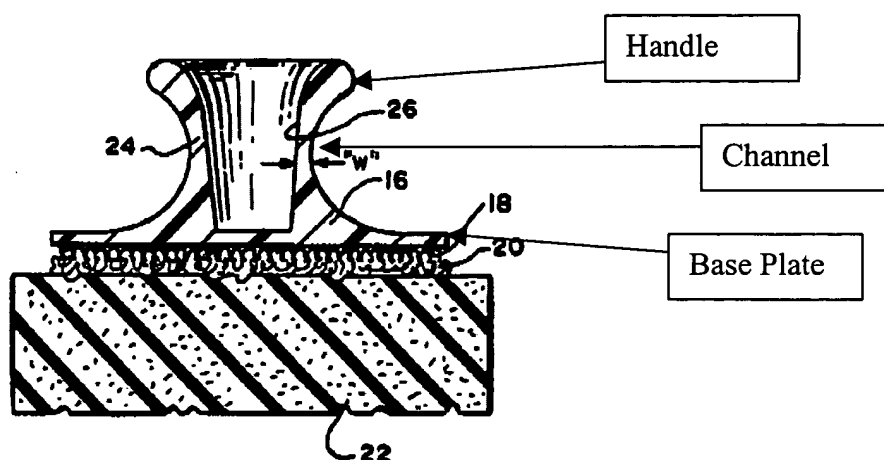
Fay teaches a cleaning device comprising a handle (11) and base plate (1). There is a cleaning member (15) attached to the base plate. The handle comprises a channel (13) between the bottom surface of the handle and the base plate. There is a connector (12) connecting the handle and the base member. The connector allows the handle to be removed from the base plate.

Nortman teaches fastening hooks having a T-shaped projection each with a top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to

Art Unit: 1744

the top segment than at said free ends (figure 5). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Paepke so that the handle is detachable from the base plate as taught by Fay since making integral parts separable is an example of a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Dulberg* 129 USPQ 348, 349. Additionally, it would have been obvious to use the hooks as taught by Nortman as the fastening means on Paepke since the hooks of Nortman can exhibit substantially equal fastening properties in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Paepke and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together. Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Paepke.



Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of Nortman and further in view of Garcia (USPN 5419015) or Hintz et al. in view of Nortman and further in view of Garcia (USPN 5419015) or Paepke in view Fay and Nortman in further view of Garcia (USPN 5419015).

Graham in view of Nortman or Hintz in view of Nortman or Paepke in view of Fay and Nortman all teach all the essential elements of the claimed invention including a handle member includes a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand and the grasping means is integral with the base plate (claim 11). The references however fail to teach a cleaning member with a third surface comprising a scouring pad (claim 9). Garcia teaches a cleaning member that comprises a first surface of loop material (figure 8, element 32), a second surface of sponge material (figure 8, element 33) and a third surface of an abrasive material such as a scouring pad (figure 8, element 34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a scouring pad to the sponge surface of Graham in view of Nortman or Hintz in view of Nortman or Paepke in view of Fay and Nortman's cleaning member as taught by Garcia so as to increase the cleaning capabilities and versatility of the device.

***Applicant's Arguments***

1. Applicant argues that Graham, Hintz and Paepke do not teach the Applicant's handle.

2. Graham and Hintz are not substantially contoured for ergonomic grip.

3. Hintz's handle is not readily detachable.

4. Fay does not teach a cleaning device having a handle that is ergonomically contoured.

5. Garcia does not teach a cleaning device comprising a cleaning member, a base plate, a ergonomic handle and a connector wherein the ergonomic handle has a substantially contoured top portion.

6. Hortel does not pertain to a cleaning device for cleaning, scouring, and polishing a variety of surfaced that can be found in household, commercial and industrial applications. Hortel teaches a spot cleaning device for fabrics such as wool, cotton or silk. Additionally, Hortel teaches a "bulb" and not a sphere shape.

***Response to Arguments***

Applicant's arguments filed 5/26/06, with respect to Graham, Hintz, Paepke, Fay and Garcia, have been fully considered but they are not persuasive.

1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., details of the applicant's handle; not pivotally connected, molded elongated handle, etc...) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van*

Art Unit: 1744

*Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, since the claims do not include limitations which would exclude certain reference's handles, the handles of the prior art read on the present invention.

2. According to the dictionary.com, the term "contour" refers to the outline of a figure, body or mass. The handles of the prior art all have a contour, since they all have a shape. Therefore, the reference still read on the claim limitations. Additionally, dictionary.com defines "ergonomic" as the applied science...intended to maximize productivity by reducing fatigue and discomfort. The idea of comfort varies from person to person and therefore, the shapes of the handles may reduce fatigue and discomfort in some but not in others. Therefore, all the handles on the prior art devices are considered ergonomic since everyone is different. The handle of one device might be ergonomic for one individual while the handle of another device is ergonomic for another.

3. Applicant argues that Hintz's handle is not readily detachable however, the specification, drawings and claims do not define the limitation detachable beyond common knowledge. Therefore, lacking any further definition, the handle of Hintz is detachable whether or not it is considered readily detachable since the screws (46) indicate that the handle is removable from the base plate.

4. Applicant argues that Fay teaches a hairbrush that is capable of thoroughly brushing human hair and not a cleaning device. The Examiner would like to point out that the reference of Fay was not used as a primary reference but as a secondary reference to Paepke. Fay was used solely to show a device with a detachable handle. The device of Fay is similar to the device of Paepke and therefore, an obvious type rejection was made to show that it would

Art Unit: 1744

have been obvious to use a detachable handle on Paepke invention. Thus, the intended use of Fay is irrelevant and the rejection is maintained.

5. Applicant is correct in stating that Garcia only teaches a mop having a flat work pad. The flat work pad of Garcia comprises a loop material, a sponge and a scouring material. The Examiner used Garcia as a secondary reference to Graham, Hintz and Paepke to show that it would have been obvious to add a scouring pad to the sponges of the prior art to increase the cleaning capabilities. Therefore, since Garcia was used as a secondary reference for the scouring pad, Garcia is not required to include all the elements of the claimed limitation. The combination of the primary references and the secondary references will meet the claim limitations.

6. After further consideration, the Examiner has withdrawn the rejections with the reference of Hortel since it has been decided that it was an unnecessary rejection based on the claim language. Claims 11 and 12 state that the grasping means must be either a sphere *or* curved throughout and that the grasping means must be integral with the base plate *or* removable from the base plate. Paepke alone teaches a grasping means that is curved throughout (circular handle and top portion of handle has rounded or curved edges) and will fit within the curvature of a user's hand since the overall shape of the handle is circular. Additionally, Paepke teaches that the grasping portion is integral with the base plate. Therefore, the Hortel reference was not needed as a secondary reference to meet the claim limitations.

Art Unit: 1744

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Slb  
7/26/06